

204.2 - Optical Properties

- [Molecular Luminescence \(solid form\)](#)
- [Specular Spectral Reflectance \(plate form\)](#)
- [Infrared Reflectance \(solid form\)](#)
- [Optical Rotation \(powder form\)](#)
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- [Liquid Refractive Index - Mineral Oil](#)
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- [Table 204.1 - Molecular Transmittance/Absorbance](#)

Molecular Luminescence (solid form) - This SRM is for use in the evaluation of methods and the calibration of fluorescence spectrometers. Issued in 1 g units, SRM 936 consists of solid quinine sulfate dihydrate. It is certified for the relative molecular emission spectrum, E (λ), in radiometric units for a solution of 1.28×10^{-6} mol/L quinine sulfate dihydrate in 0.105 mol/L perchloric acid using an excitation wavelength of 347.5 nm. The values of the molecular emission spectrum are certified at 5 nm wavelength intervals from 375 nm to 675 nm. The user must prepare the solution and transfer it to a cuvette of known pathlength. A detailed discussion of this SRM is given in Special Publication 260-64.

For further information see [SP 260-64](#).

Specular Spectral Reflectance - These SRMs are for calibrating the reflectance scale of integrating sphere reflectometers used to evaluate materials for solar energy collectors and to calibrate reflectometers used in evaluating the appearance of polished metals and metal-plated objects.

SRMs 2011, 2013, 2015 and 2021 are now being supported by Calibration Service (Service No. 38060S). Click here for further information: <https://ts.nist.gov/MeasurementServices/Calibrations/opticalproperties.cfm#38061S>.

For further information see [SP 260-70](#) and [SP 260-75](#).

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SRM	Description	Unit Size
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